

Reply to: 3460

November 29, 1988

Subject: Proposed 1989 Gypsy Moth Suppression Spray Blocks,  
Allegheny National Forest

To: Forest Supervisor, ANF

Enclosed are 6 tables and 21 maps which show the proposed gypsy moth spray block locations for 1989 and some descriptive information about each block. Also included in this report are the Issues, Concerns, and Opportunities and the selection criteria used to select each block.

The tables show that as much as 25,253 acres could be sprayed with B.t. with approximately 17,000 of those acres being treated for a second time and 5165 acres eligible for treatment with Dimilin under the ANF spray project. Information regarding the location and size of any PA Bureau of Forestry blocks which may lie within the National Forest boundaries is not available at this time.

Kelly Riddle and Mary Knott, of the FPM staff, developed these figures from meetings held at the four ANF Ranger Districts during the weeks of November 7 and 14. On November 8 at the Marienville RD, Kelly and Mary met with Lois Demarco and Kelly met with her again on November 17. At the Ridgway RD on the 9th of November, FPM personnel met with Lionel Lemery, Steve Wingate, and Randy Demarco. The afternoon of the 9th, Kelly and Mary met with Harold Schopper of the Sheffield RD where it was decided that because of extremely low egg mass densities, no spray blocks would be designated in the Sheffield RD. At the Bradford RD on November 10, Kelly met with Corbin Newman, Stan Kobielski, Scott Wright, Marlin Rogers, and Jim Rodebaugh.

The information contained in this memo will be used by the ID team for the Gypsy Moth EA to develop sound, practical, alternative management strategies for dealing with the gypsy moth in 1989.

*Robert E. Acciavatti/KSR*

ROBERT E. ACCIAVATTI

Acting Field Representative, FPM, Morgantown

cc: AO

Forest Supervisor, ANF  
District Ranger, Bradford RD  
District Ranger, Marienville RD  
District Ranger, Ridgway RD  
R. Van Aken, R-9, TM  
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Enclosure

TABLE 1. ISSUES, CONCERNS AND OPPORTUNITIES FOR THE  
1989 GYPSY MOTH SPRAY PROJECT

<u>VEGETATION</u>	<p>Will the spread of gypsy moth into other areas of the Forest be reduced?</p> <p>Will the oak forest type be maintained? (This emerged as a concern during the public involvement process for the Forest Plan.)</p> <p>Will aspen and apple components and other vegetation of high value to wildlife be maintained?</p> <p>How should areas that have repeated high populations of gypsy moth be treated?</p> <p>What effect will additional mortality have in areas where some mortality has already occurred? How will understory vegetation be affected? What are the long term implications for future stand species composition?</p>
<u>DEVELOPED RECREATION</u>	<p>Would existing recreation opportunities be maintained at developed recreation sites?</p>
<u>DISPERSED RECREATION</u>	<p>Would quality dispersed recreation experiences be maintained?</p> <p>Will visual quality be maintained along sensitive travel corridors?</p>
<u>TIMBER</u>	<p>Will high value oak stands be protected against excessive mortality and loss?</p> <p>Will special interest areas be protected? (KEF, Oak Limiting Factors study area, Dunham Siding, etc.)</p>
<u>WILDLIFE</u>	<p>Will people's concerns about the effects on fish and wildlife through physical contact and ingestion of insecticides be addressed?</p> <p>Will the effects on aquatic and terrestrial wildlife habitat be acceptable? (Relates to the option of using Bt or diflubenzuron)</p>
<u>ECONOMICS</u>	<p>What are the nonmonetary benefits associated with spraying for gypsy moth?</p> <p>What are the costs and benefits associated with the project?</p>
<u>HUMAN HEALTH AND SAFETY</u>	<p>Would people's concerns about the direct, indirect, and residual health effects of aerial insecticide spraying (from physical contact and ingestion) be addressed?</p>
<u>GENERAL</u>	<p>If the size of the spray project necessitates the use of Dimilin, does that change the perception of "need" for a spray program?</p>

TABLE 2. SELECTION CRITERIA FOR POTENTIAL SPRAY BLOCKS

1. All stands in entomological areas with mod/severe predictions which have susceptible vegetation. (Oak, apple, aspen)
2. All developed recreation areas which:
  - A. Have egg mass counts  $>250/\text{Ac.}$   
or
  - B. Are within 1 mile of areas with egg mass counts  $>750/\text{Ac.}$   
or
  - C. Have increasing populations.
3. Visual corridors located outside ento. areas with mod/severe predictions which susceptible vegetation and high egg mass counts.
4. Areas which were sprayed last year that are outside the ento. areas and still have high egg mass counts.
5. New areas which are outside ento. areas and that have high egg mass counts and susceptible vegetation.
6. Areas in ento. areas with light defoliation predictions which have susceptible vegetation and egg mass counts greater than  $500/\text{Ac.}$

TABLE 3. 1989 SPRAY BLOCK ACREAGE  
BY BENEFITTING RESOURCE AND PESTICIDE

BENEFITTING RESOURCE	RANGER DISTRICT	PESTICIDE		TOTAL
		B.T.	DIMILIN	
TIMBER HIGH VALUE	BRADFORD	1261	--	1261
	RIDGWAY	--	--	--
	MVILLE	1317	1474	2791
	Subtotal	2578	1474	4052
TIMBER LOWVALUE	BRADFORD	--	--	--
	RIDGWAY	4668	545	5213
	MVILLE	2182	1416	3598
	Subtotal	6850	1961	8811
WILDLIFE	BRADFORD	3890	623	4513
	RIDGWAY	826	378	1204
	MVILLE	4992	395	5387
	Subtotal	9708	1396	11104
VISUAL	BRADFORD	280	334	614
	RIDGWAY	2064	--	2064
	MVILLE	469	--	469
	Subtotal	2813	334	3147
DEVELOPED RECREATION	BRADFORD	2284	--	2284
	RIDGWAY	--	--	--
	MVILLE	--	--	--
	Subtotal	2284	--	2284
DISPERSED RECREATION	BRADFORD	1020	--	1020
	RIDGWAY	--	--	--
	MVILLE	--	--	--
	Subtotal	1020	--	1020
GRAND TOTAL		B.T. 25,253	DIMILIN 5,165	30,418



TABLE 4. PROPOSED 1989 GYPSY MOTH SPRAY BLOCKS, ALLEGHENY NATIONAL FOREST

BLOCK #	ACRES	RESOURCE AT RISK	DEFOLIATION POTENTIAL	INSECTICIDE	ENTO AREA	MGT AREA	QUAD	COMP #, STAND #'S
M-1	67	Timber	Moderate	Bt	M-8	3.0	Hallton-29	106/ 29,33
M-2	128	Timber	Moderate	Dimilin	M-8	3.0	Hallton-29	106/ 1,3,5
M-3A	42	Visual	Moderate	Bt	M-8	6.1	Hallton-29	106/ 6,7,9,25,26
M-3B	207	Timber	Moderate	Dimilin	M-8	6.1	Hallton-29	
M-4	264	Timber	Moderate	Dimilin	M-8	6.1	Hallton-29	106/ 14,15,17,18,
M-5	480	Timber	Moderate	Dimilin	M-8	6.1	Hallton-29	105/ 9,10,11,21 106/ 10,12,13,28
M-6	48 71	Visual	Moderate	Bt	M-8	6.1	Munderf-33 Hallton-29	105/ 5
M-7	38	Timber	Moderate	Dimilin	M-8	3.0	Hallton-29	105/20
M-8	127 110	Timber Timber	Moderate Moderate	Dimilin	M-8	6.1	Munderf-33 Hallton-29	105/ 1,2,3,4
M-9	33 80	Visual	Moderate	Bt	M-8	6.1	Munderf-33 Hallton-29	106/18,20
M-10	577 673	Timber	Moderate/ Severe	Bt	M-6	3.0/6.2	Kelletville Mayburg-	23/24
M-11	120	Timber	Moderate	Dimilin	M-8	3.0	M'ville East	92/ 24-30
M-12	82	Wildlife	Moderate	Dimilin	M-8	3.0	M'ville East	92/ 18, 19, 31
M-13	73	Wildlife	Moderate	Bt	M-8	6.1	M'ville East	68/ 42,43
M-14	215	Wildlife	Moderate	Bt	M-11	3.0	M'ville East	69/ 15-17 78/ 14,20
M-15	273	Wildlife	Moderate/ Severe	Dimilin	M-11	3.0	M'ville East	68/ 27,32,47,48
M-16	423 76	Timber	Moderate/ Severe	Bt	M-11	3.0	Sigel M'ville East	90/ 1,2,3,5,7 77/ 1,2,8-11,14
M-17	171	Timber	Moderate/ Severe	Dimilin	M-11	3.0	Sigel M'ville East	66/ 27 66/1-4,27
M-18	178	Timber	Moderate/ Severe	Dimilin	M-11	3.0	M'ville East	67/ 24-28
M-19	172	Timber	Moderate/ Severe	Dimilin	M-11	1.0	M'ville East	67/19,20,22,23,24

TABLE 4. (CONTINUED)

BLOCK #	ACRES	RESOURCE AT RISK	DEPOLIATION POTENTIAL	INSECTICIDE	ENTO AREA	MGT AREA	QUAD	COMP #, STAND #'S
M-20	270	Timber	Moderate/ Severe	Dimilin	M-11	1.0	M'ville East	67/ 6-8,12-15
M-21	539 109	Timber	Moderate/ Severe	Bt	M-11	6.1	Sigel M'ville East	66/ 5-30 66/5-13
M-22	238	Wildlife	Moderate/ Severe	Bt	M-11	6.1	M'ville East	68/ 7,8
M-23	28	Wildlife	Moderate Severe	Bt	M-11	3.0	M'ville East	
M-24	501	Wildlife	Moderate/ Severe	Bt	M-11	1.0	M'ville East	62/
M-25	382	Wildlife	Moderate/ Severe	Bt	M-11	3.0	M'ville East	63/ 2-4,11,12
M-26	449	Wildlife	Moderate/ Severe	Bt	M-11	3.0	M'ville East	64/ 4-10,13,14 70/ 5-7
M-27	15	Wildlife	Moderate/ Severe	Bt	M-11	3.0	M'ville East	60/ 27,33
M-28	149	Wildlife	Moderate Severe	Bt	M-11	3.0	M'ville East	71/ 7,8,9,27
M-29	23	Wildlife	Moderate/ Severe	Bt	M-11	3.0	M'ville East	72/ 5,7
M-30	1166	Wildlife	Moderate/ Severe	Bt	M-11	3.0	M'ville East	
M-31	242	Wildlife	Moderate/ Severe	Bt	M-11	3.0	M'ville East	
M-32	584	Wildlife	Moderate/ Severe	Bt	M-11	3.0	M'ville East	72/ 9-33
M-33	555	Wildlife	Moderate/ Severe	Bt	M-11	6.3	M'ville East	72/38-48 71/1-3,21,25,26
M-34	402	Wildlife	Moderate/ Severe	Bt	M-11	6.1	M'ville East	
M-35	170	Wildlife	Moderate/ Severe	Bt	M-11	3.0	M'ville East	78/ 4,10

TABLE 4. CONTINUED

BLOCK #	ACRES	RESOURCE AT RISK	DEPOLIATION POTENTIAL	INSECTICIDE	ENTO AREA	MGT AREA	QUAD	COMP #, STAND #'S
M-36	40	Wildlife	Moderate/ Severe	Dimilin	M-7	6.1	Sigel	54/ 1,2 55/ 67
M-37	42	Timber	Moderate/ Severe	Dimilin	M-7	6.1	Sigel	55/ 5 56/ 24,25
M-38	377	Timber	Moderate/ Severe	Dimilin	M-7	3.0	Sigel	55/ 14-24,27,28
M-39	48	Timber	Moderate/ Severe	Bt	M-7	6.1	Sigel	54/ 6-8
M-40	67	Timber	Moderate/ Severe	Dimilin	M-7	6.1	Sigel	54/ 3-5
M-41	185	Timber	Moderate/ Severe	Dimilin	M-7	6.1	Sigel	54/ 9-16
M-42	195	Visual	Moderate/ Severe	Bt	M-7	6.1	Sigel	55/ 19-33
M-43	688	Timber	Moderate/ Severe	Bt	M-7	6.1	Sigel	65/ A11
M-44	199	Timber	Moderate/ Severe	Dimilin	M-7	6.1	Sigel	90/ 3,4,5,8-12
M-45	25	Timber	Moderate/ Severe	Dimilin	M-7	6.1	Sigel	90/ 13
M-46	29	Timber	Moderate/ Severe	Bt	M-7	6.1	Munderf	90/14
<b>TOTAL</b>	<b>12,245</b>							

TABLE 5. 1989 PROPOSED GYPSY MOTH SPRAY BLOCKS,  
RIDGWAY RD, ALLEGHENY NF.

BLOCK #	ACRES	RESOURCE AT RISK	DEFOLIATION POTENTIAL	INSECTICIDE	ENTO AREA	MGT AREA	QUAD	COMP #, STAND #'S
R-1	83	Timber	Moderate	Dimilin	R-3	6.1	Hallton	92/ 9 94/ 1,2,25
R-2	90	Wildlife	Moderate	Dimilin	R-3	6.1	Hallton	92/ 6,8
R-3	56	Wildlife	Moderate	Bt	R-3	6.1	Hallton	92/ 19
R-4	250	Timber	Moderate	Dimilin	R-3	3.0	Hallton	91/ 11,16,17,24-2
R-5	164	Timber	Moderate	Dimilin	R-3	3.0	Hallton	91/ 43-46
R-6	585	Timber	Moderate	Bt	R-2	3.0	Hallton	104/ 3-8,11,14,15
R-7	319	Timber	Moderate	Bt	R-2	1.0	Hallton	105/ 6-14,16,19,2
R-8	282	Visual/ Timber	Moderate	Bt	R-2	6.1	Hallton	104/ 8-11,15 105/ 22,24,25,30,
R-9	451	Visual Timber	Moderate	Bt	R-2	6.1	Hallton	105/ 33-35,38,39, 53-58
R-10	126	Visual	Moderate	Bt	R-2	6.1	Hallton	105/ 36,37,48-51,
R-11	48	Timber	Moderate	Dimilin	R-2	6.1	Hallton	106/ 83,86,87
R-12	161	Visual Timber	Moderate	Bt	R-2	6.1	Hallton	113/ 30,31,44,46, 63,72,12,48 114/ 13-17,3,4
R-13	163	Wildlife	Moderate	Dimilin	R-2	6.1	P'land Mills	114/ 2,5,6
R-14	1466	Timber	Severe	Bt	R-1	6.1	P'land Mills	112/ 1-9,12-19,22 32,33,,46,53 113/ 1-10,12-45,5
R-15	69	Visual	Severe	Bt	R-1	6.1	P'land Mills	107/ 1 113/ 11
R-16	508 248	Visual	Severe	Bt	R-1	6.1	P'land Mills Carman	113/ 61,62 112/ 20,21,31-42,
R-17	457	Timber/ Visual	Severe	Bt	R-1	6.1	P'land Mills	110/ 3-9 111/ 1-4,7,13,28 112/ 10,11
R-18	1299	Timber	Severe	Bt	R-1	6.1	P'land Mills	110/ 1-3 111/ 2,8-12,14,15

TABLE 5. CONTINUED

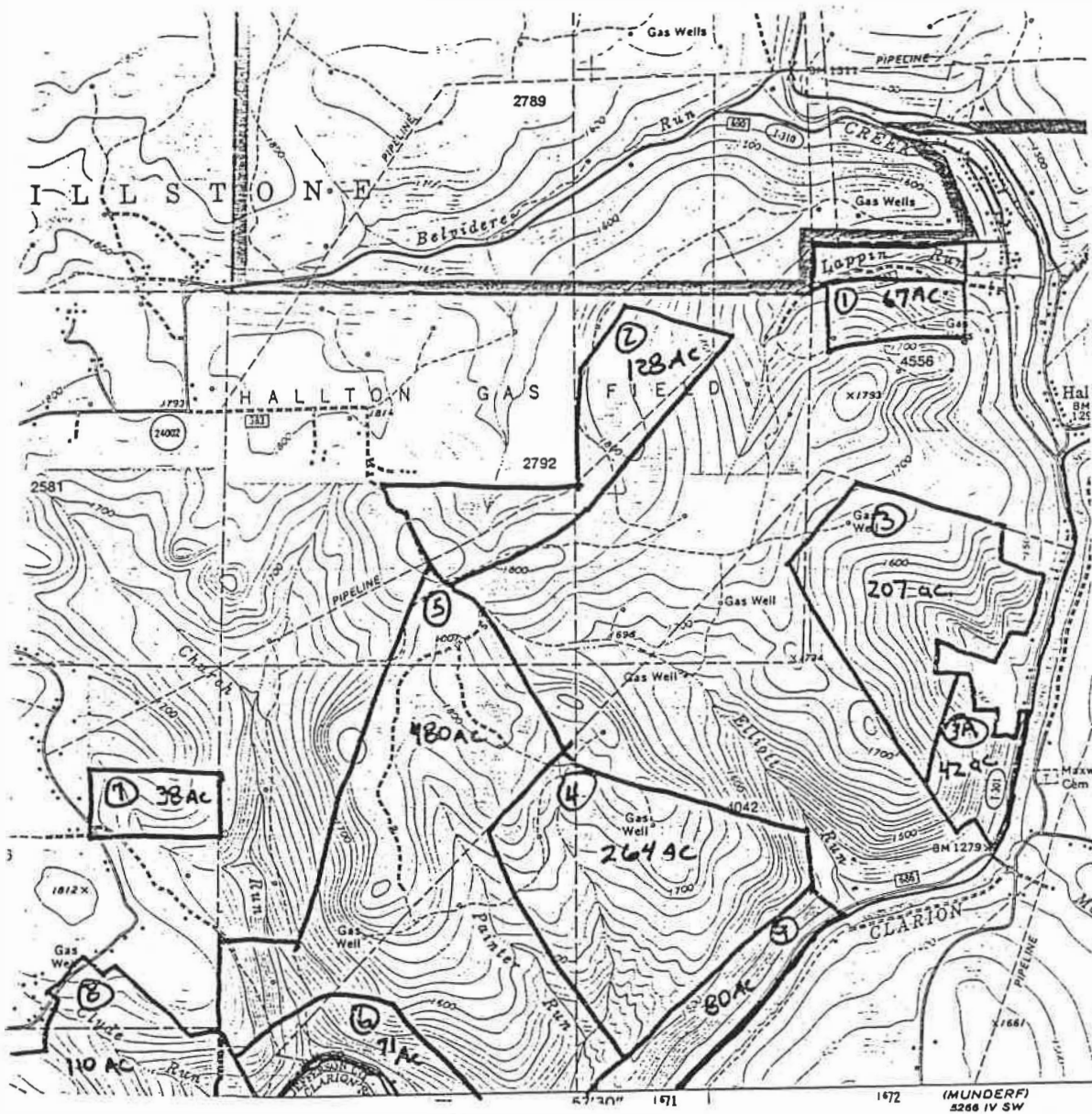
BLOCK #	ACRES	RESOURCE AT RISK	DEFOLIATION POTENTIAL	INSECTICIDE	ENTO AREA	MGT AREA	QUAD	COMP #, STAND #'S
R-19	542	Timber	Severe	Bt	R-1	6.1	P'land Mills	110/ 11-27,30-44
R-20	219	Visual	Severe	Bt	R-1	3.0	P'land Mills	110/ 23,28,29,44-
R-21	119	Wildlife	Moderate	Bt	R-3	3.0	P'land Mills	108/ 14,20,21,41 109/ 46,47
R-22	115	Wildlife	Moderate	Bt	R-3	3.0	P'land Mills	108/ 2-8 109/ 24
R-23	223	Wildlife	Moderate	Bt	R-3	3.0	P'land Mills	100/ 20-26,31,32 101/ 21-23,27,28
R-24	313	Wildlife	Moderate	Bt	R-3	1.0	P'land Mills	102/ 14-18,20-28, 106/ 19 107/ 72
R-25	58	Wildlife	Moderate	Dimilin	R-3	3.0	P'land Mills	101/ 12-14
R-26	67	Wildlife	Moderate	Dimilin	R-3	3.0	P'land Mills	101/ 6,7,9
<b>TOTAL</b>	<b>8,481</b>							

TABLE 6. 1989 PROPOSED GYPSY MOTH SPRAY BLOCKS,  
BRADFORD RD, ALLEGHENY NF.

BLOCK #	ACRES	RESOURCE AT RISK	DEFOLIATION POTENTIAL	INSECTICIDE	ENTO AREA	MGT AREA	QUAD	COMP #, STAND #'S
B-1	125	Wildlife	Moderate	Dimilin	B-7	6.1	Corn. Run	18/ 9,13 21 23-25
B-2	22-3	Wildlife/ Timber	Moderate	Dimilin/	B-7	6.1	Stickney Corn. Run	18/ 2-5,7-19,22,2 20/ 1-11,14-26 21/ 1-7,21,22 22/ 29,34-36 24/ 11-18,20,21
B-3	334	Dev. Rec.	Moderate	Bt	B-1	6.4	Stickney Corn. Run	15
B-4	542	Wildlife	Moderate	Bt	B-7	6.1	Stickney	21/ 5-7,21,23 22/ 18,26-29,32-3 23/ 1-12,14,16
B-5	111	Wildlife	Moderate	Dimilin	B-7	6.1	Corn. Run	21/ 1,5,6,8,12,17
B-6	1020	Dis. Rec.	Moderate	Bt	B-1	6.4	Corn. Run	13,14
B-7	287	Dev. Rec.	Moderate	Bt	B-1	6.4	Corn. Run	14
B-8	172 215	Wildlife	Moderate	Dimiline	B-6	6.1	Corn. Run Corn. Bdg	41/ 1,2,4-6,12,17
B-9	149	Dev. Rec	Moderate	Bt	B-6	6.1	Corn. Bdg.	41/ 19,21,22 46/ 6-8,17,21-23,
B-10	283	Wildlife	Moderate	Bt	B-6	6.1	Corn. Bdg.	41/ 6-8,23,24 42/ 3,4,8-10,13,1
B-11	334	Visual	Moderate	Dimilin	B-6	6.1	Corn. Bdg.	41/ 1,5,6,8 42/ 3,4,8,16 46/ 18,19
B-12	862	Wildlife	Moderate	Bt	B-6	6.1	Corn. Bdg.	46/ 1-6,8-15,18-2 28-30
B-13	119	Visual	Moderate	Bt	B-6	6.1	Corn. Bdg.	46/ 8,9,12,13,15,
B-14	870	Dev. Rec. Visual	Moderate	Bt	B-3	6.1 7.0	Corn. Bdg.	47/ 1-6,8-18
B-15	271	Timber	Moderate	Bt	B-3	6.2 B-6 6.1	Corn. Bdg. 6.1	47/ 2-4 48/ 1-6

TABLE 6. CONTINUED.

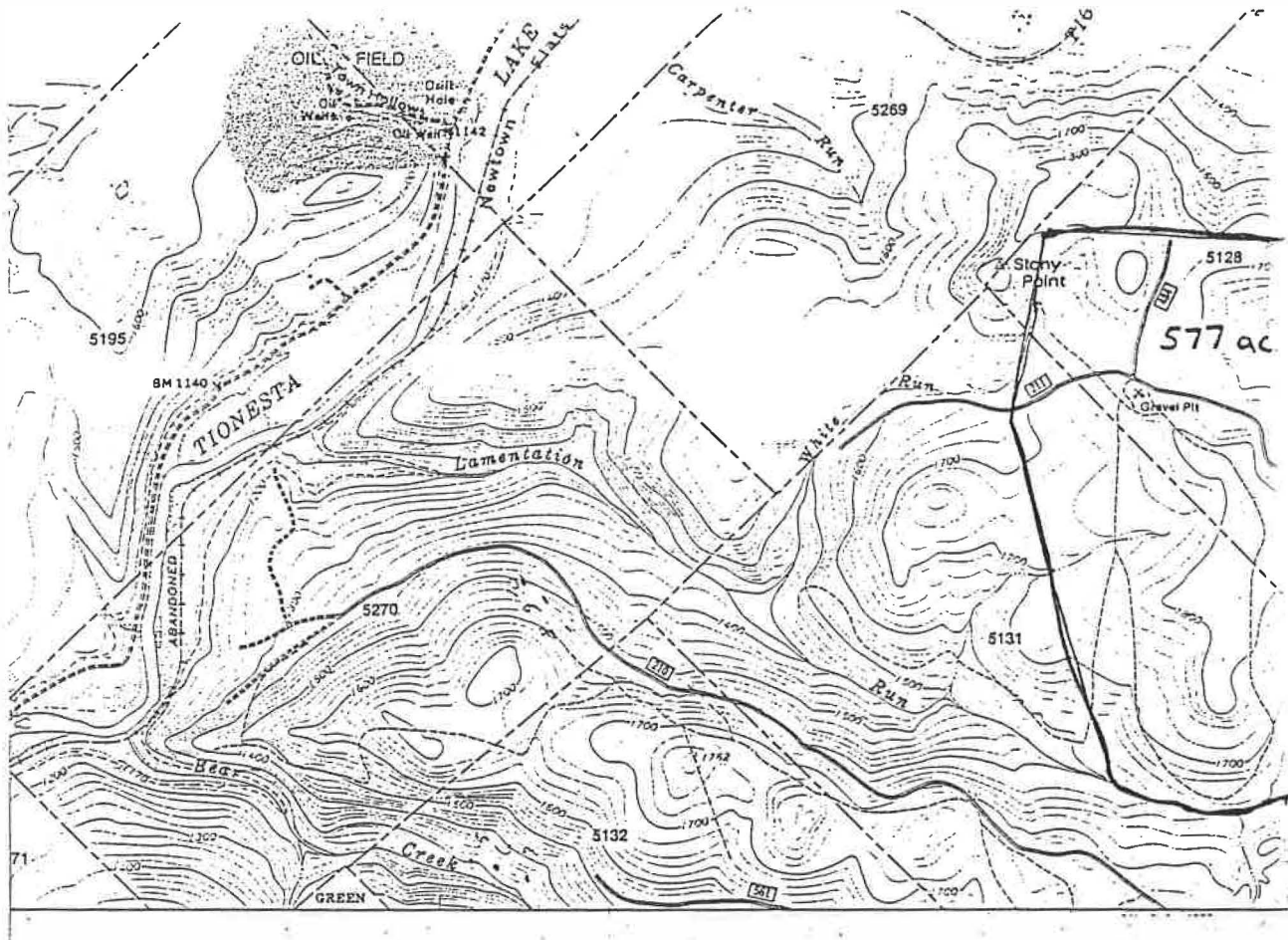
BLOCK #	ACRES	RESOURCE AT RISK	DEFOLIATION POTENTIAL	INSECTICIDE	ENTO AREA	MGT AREA	QUAD	COMP #, STAND #'S
B-16	990	Timber	Moderate	Bt	B-3 B-6	6.1 6.2	Corn. Bdg. Westline	42/ 1,3,7 43/ 7-9 48/ 1,2 49/ 1,2,4-12,14-2
B-17	161	Visual	Moderate	Bt	B-6 B-12 B-3	3.0 6.1 6.2	Corn Bdg. Westline	43/ 7,8 44/ 23,24 49/ 3 54/ 20,21
B-18	511	Dev. Rec. Moderate Timber		Bt	B-4	6.1	Corn. Bdg.	86/ 1,3,4,6-11,13 87/ 2-4,7,8
B-19	133	Dev. Rec. Moderate		Bt	B-3	6.1	Corn. Bdg.	48/ 10,13,14
TOTAL	9,692							



MAP 1

Allegheny National Forest, 1989,  
 proposed Gypsy Moth Spray Blocks.  
 Marienville Ranger District

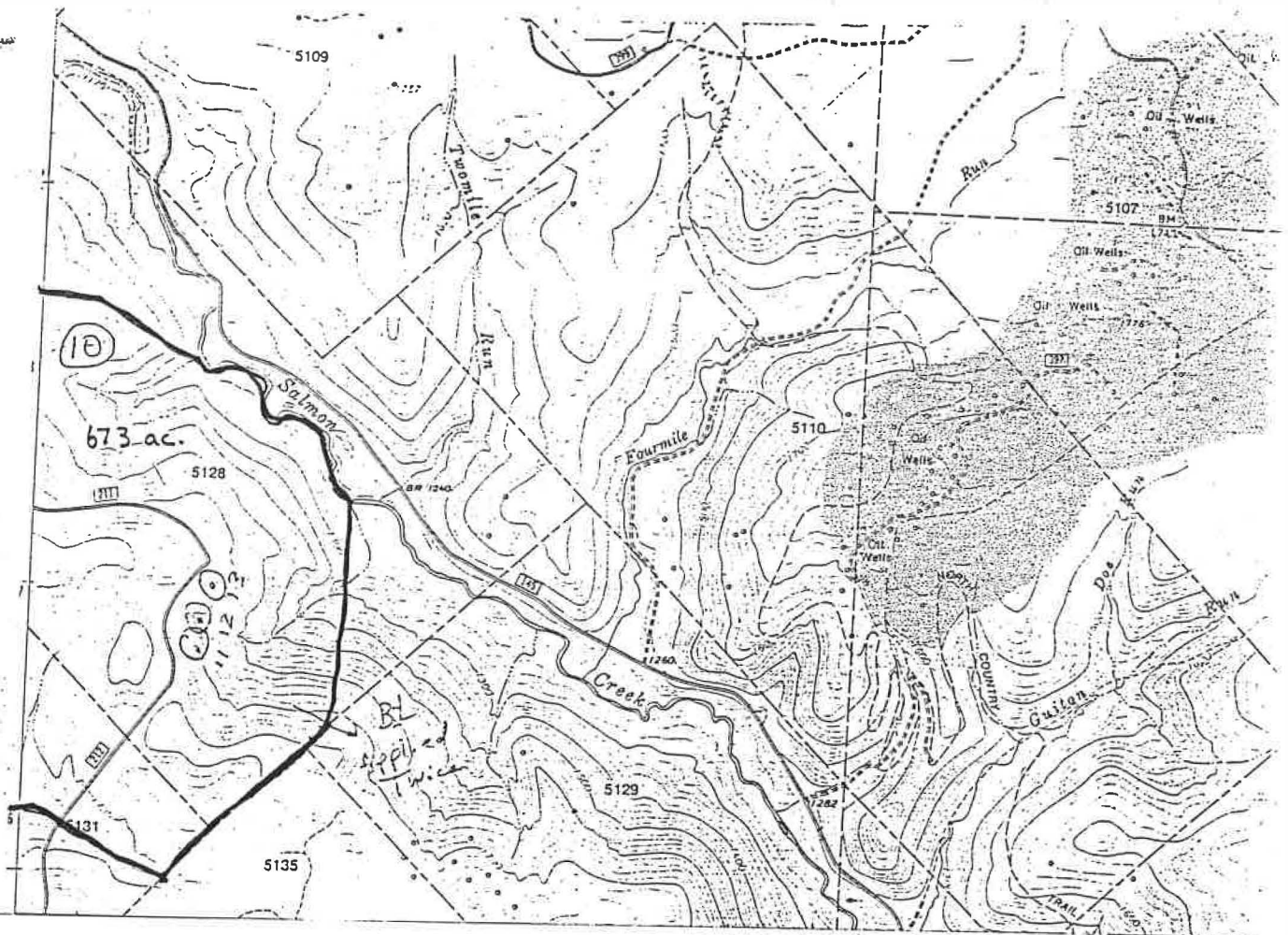




MAP 2

Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.

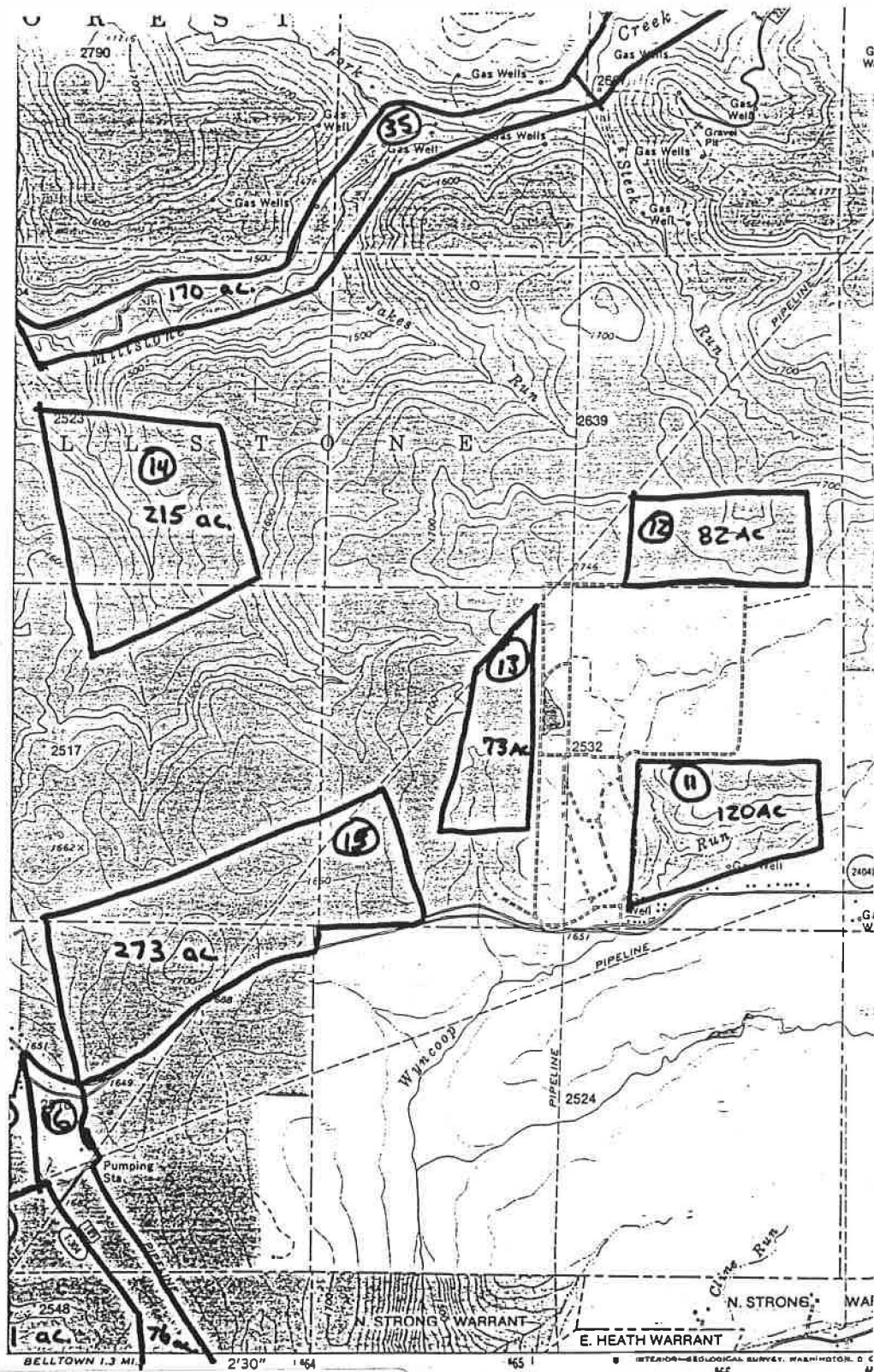
Marienville Ranger District



MAP 3

Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.

Marienville Ranger District

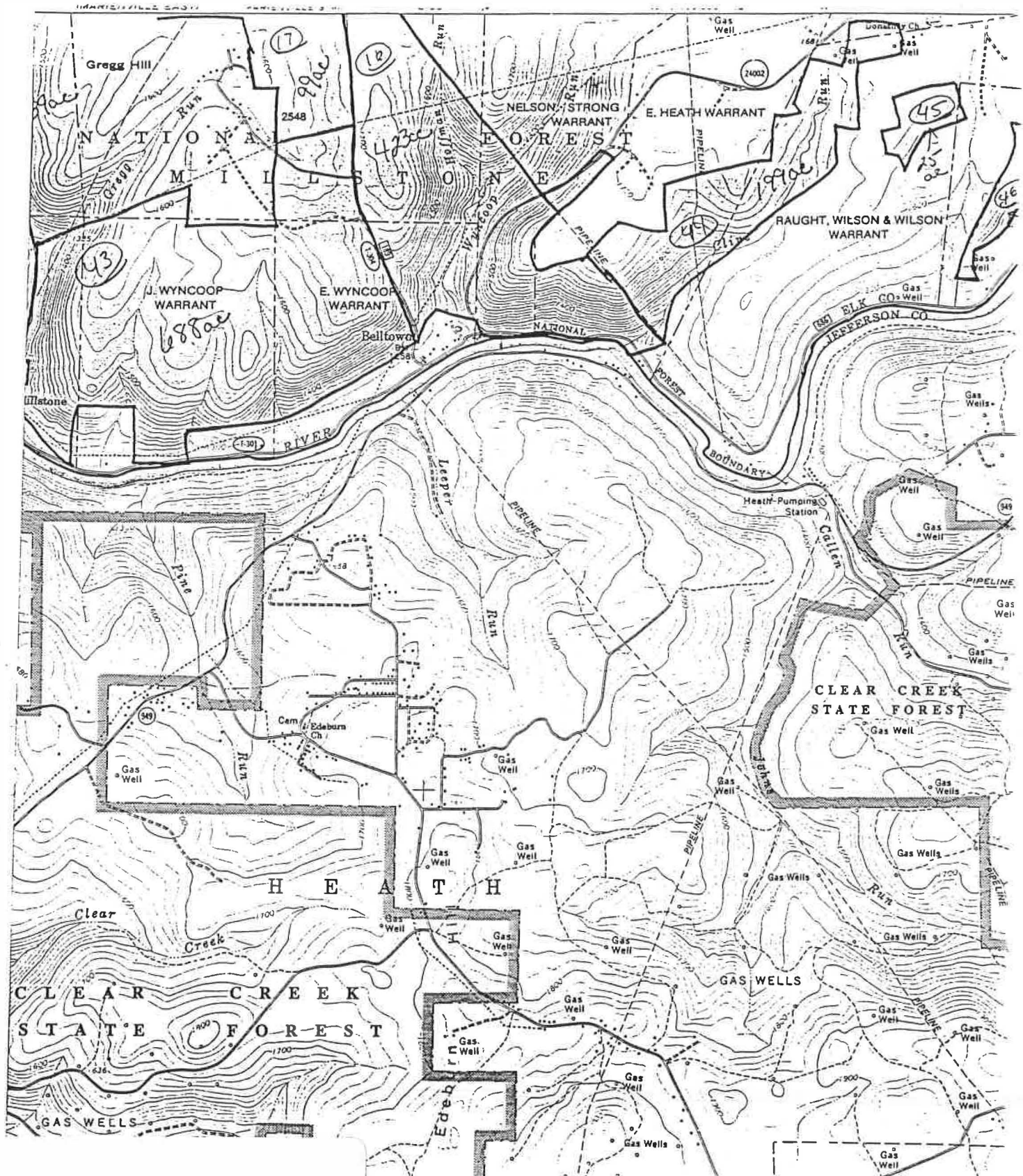


MAP 4

Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.  
Marienville Ranger District

MARIENVILLE EAST QUADRANGLE  
PENNSYLVANIA  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NE/4 MARIENVILLE 15' QUADRANGLE

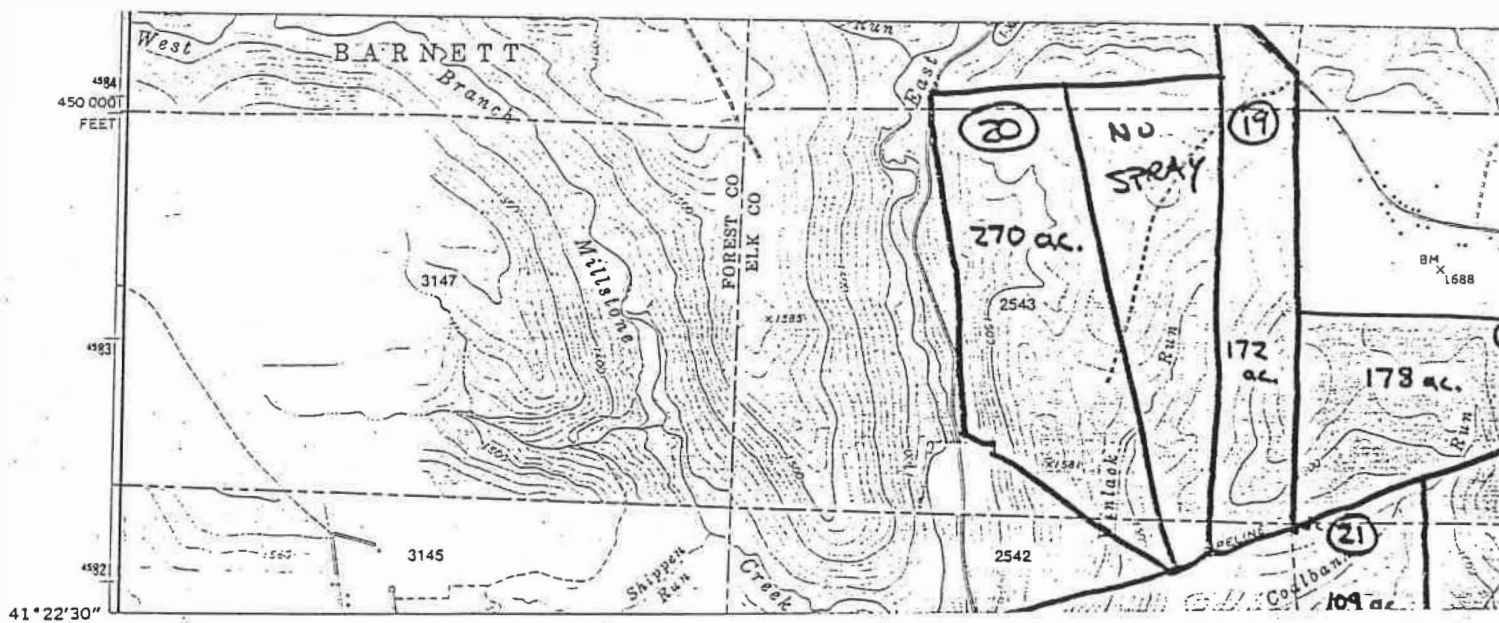




MAP 5

Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.  
Marienville Ranger District

SIGEL QUADRANGLE  
PENNSYLVANIA  
7.5 MINUTE SERIES (TOPOGRAPHIC)



MAP 6

Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.

Marienville Ranger District



MAP 7

Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.

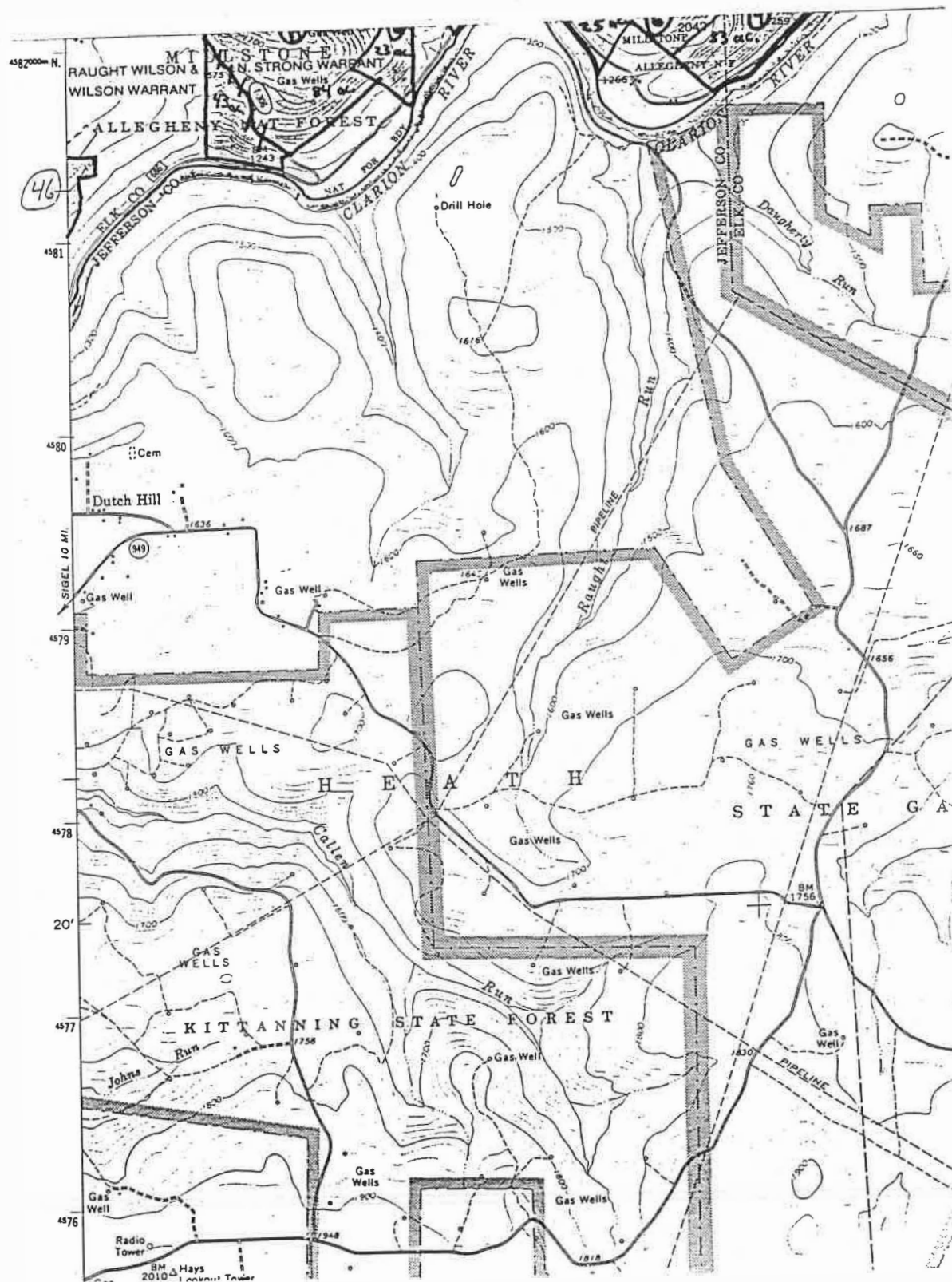
Marienville Ranger District

SIGEL QUADRANGLE  
PENNSYLVANIA  
7.5 MINUTE SERIES (TOPOGRAPHIC)

MAP 8

Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.

Marienville Ranger District

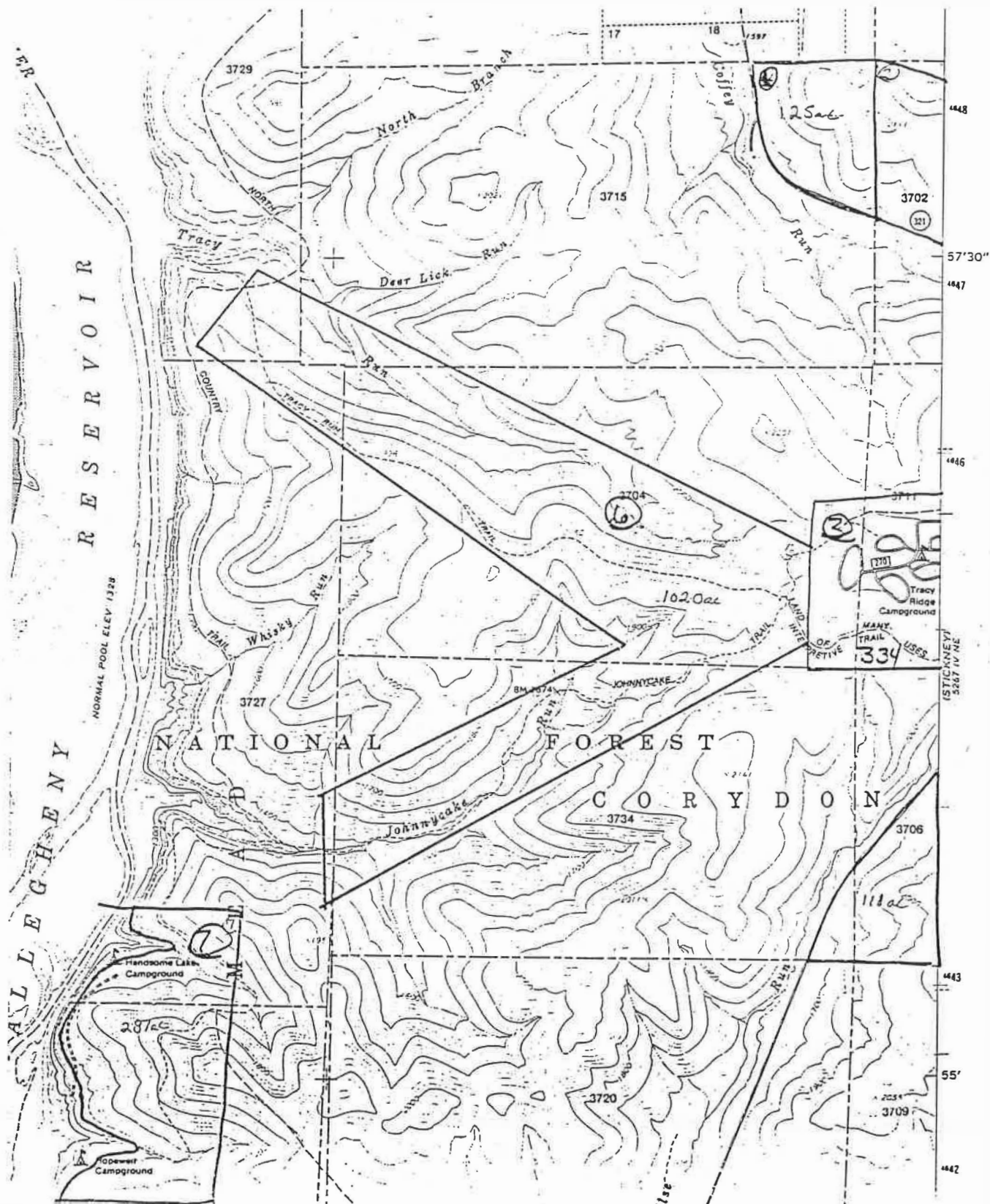


MUNDERF QUADRANGLE  
PENNSYLVANIA  
7.5 MINUTE SERIES (TOPOGRAPHIC)



Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.

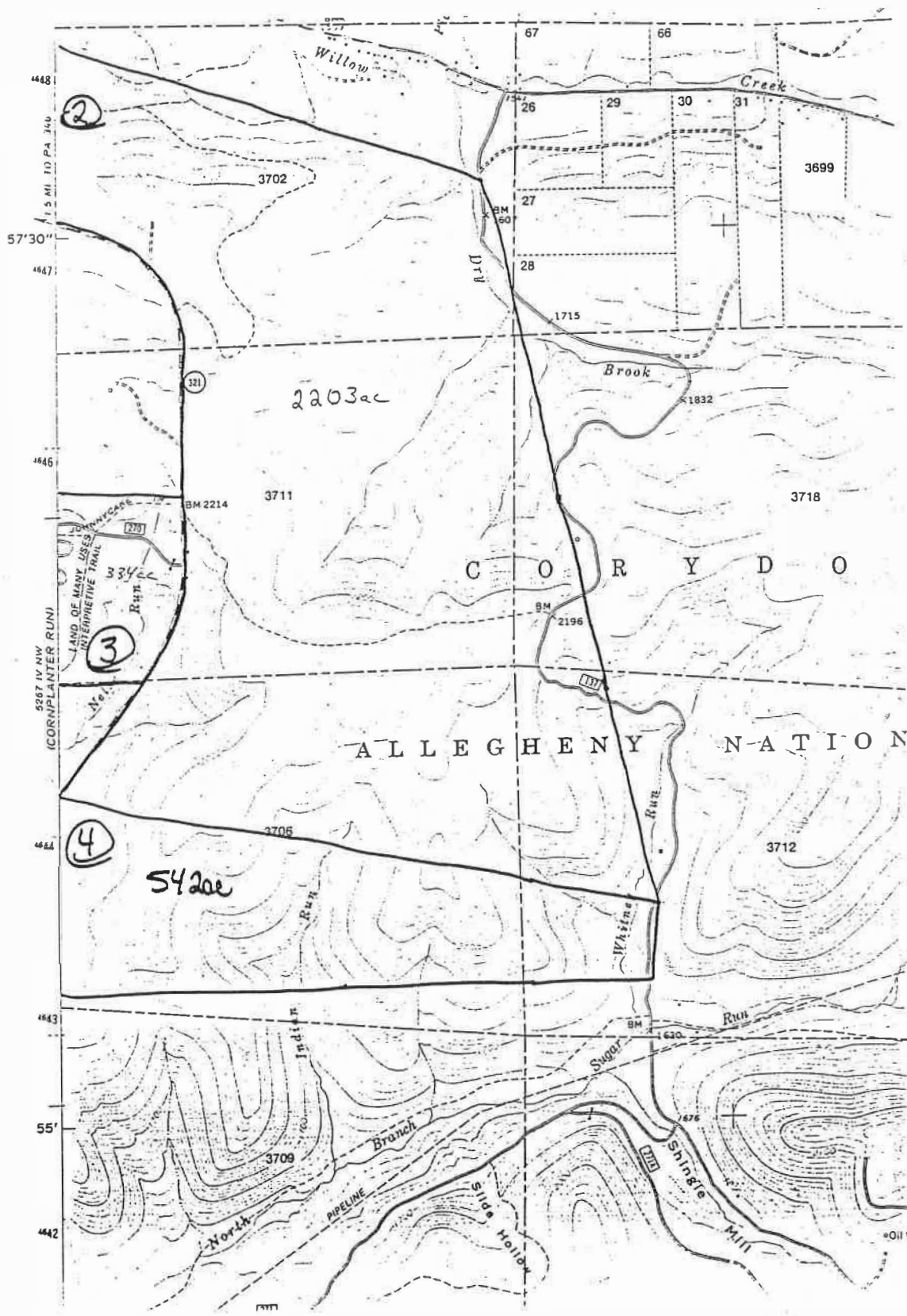
Bradford Ranger District



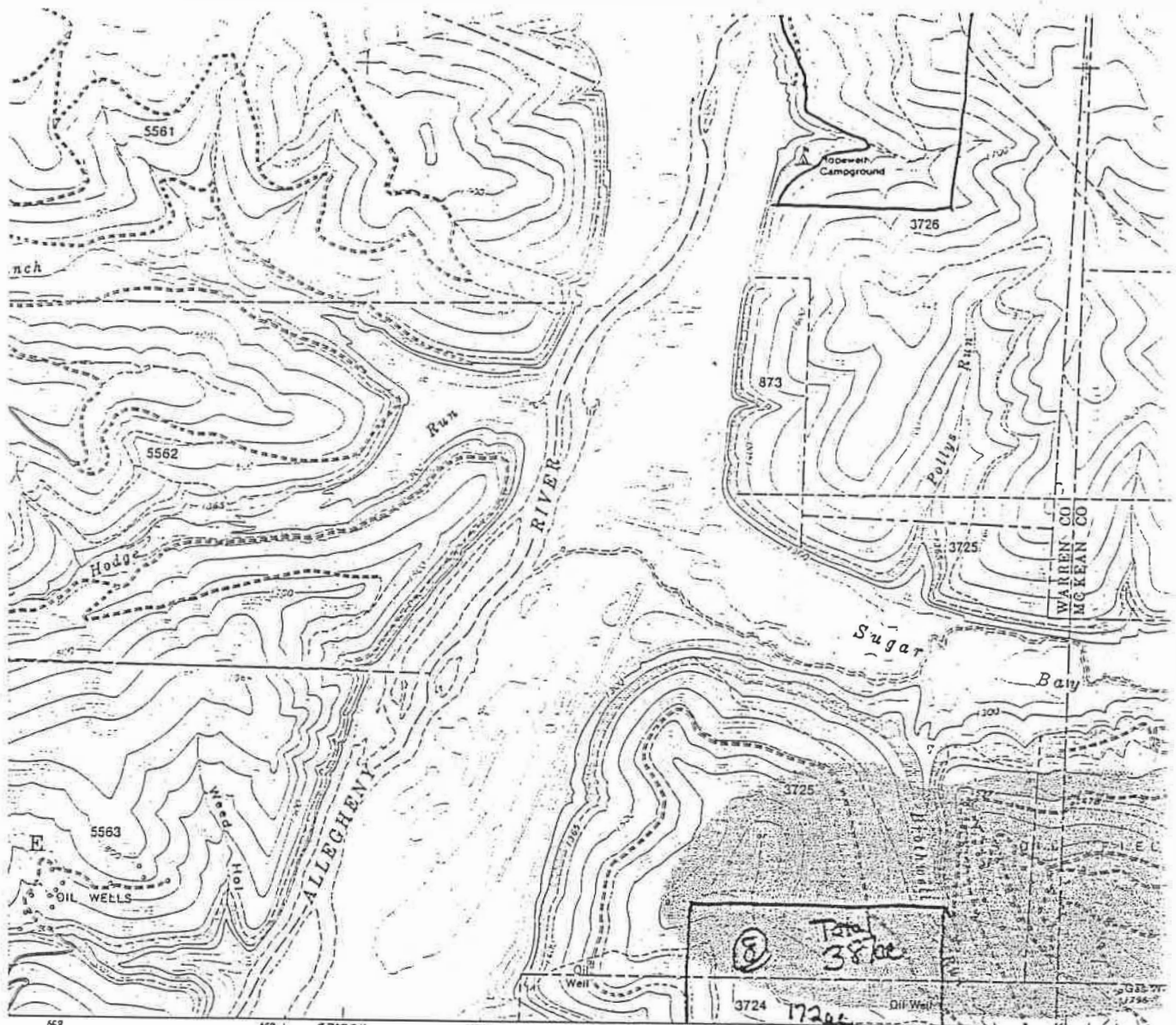
CORNPLANTER RUN QUADRANGLE  
PENNSYLVANIA-NEW YORK  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NW/4 KINZUA 15' QUADRANGLE



Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.  
Bradford Ranger District



STICKNEY QUADRANGLE  
PENNSYLVANIA-NEW YORK  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NE/4 KINZUA 15' QUADRANGLE



MAP 11

Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.

Bradford Ranger District

MAP 12

Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.

Bradford Ranger District



CORNPLANTER BRIDGE QUADRANGLE  
PENNSYLVANIA  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
SW/4 KINZUA 15' QUADRANGLE

78°52'30" 41°52'30" 477000m E 478 479 10 MI. TO PA 346



WESTLINE QUADRANGLE  
PENNSYLVANIA—MCKEAN CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
SE/4 KINZUA 15' QUADRANGLE

WESTLINE QUADRANGLE  
PENNSYLVANIA—MCKEAN CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
SE/4 KINZUA 15' QUADRANGLE



MAP 14

Allegheny National Forest, 1989,  
proposed Gypsy Moth Spray Blocks.

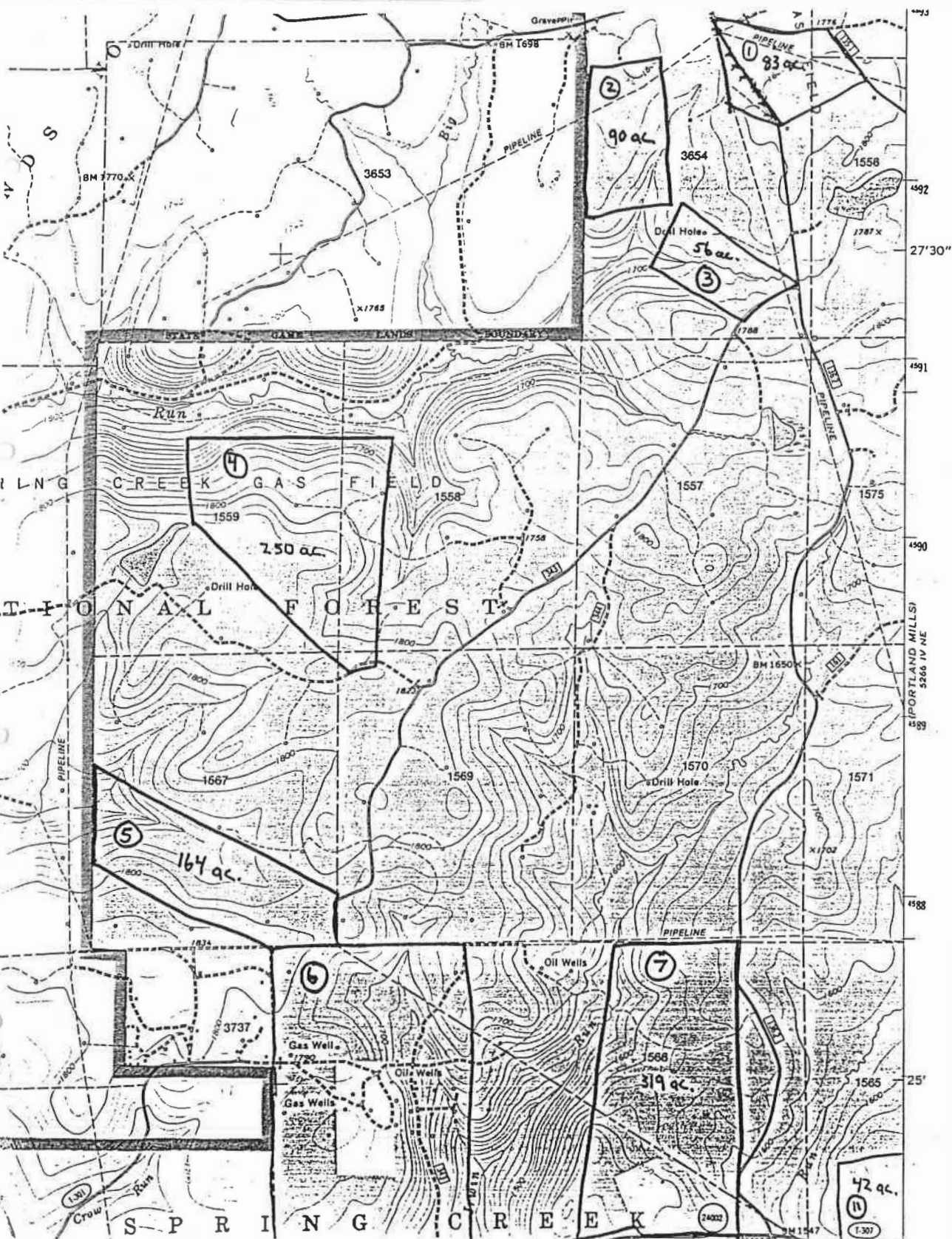
Bradford Ranger District



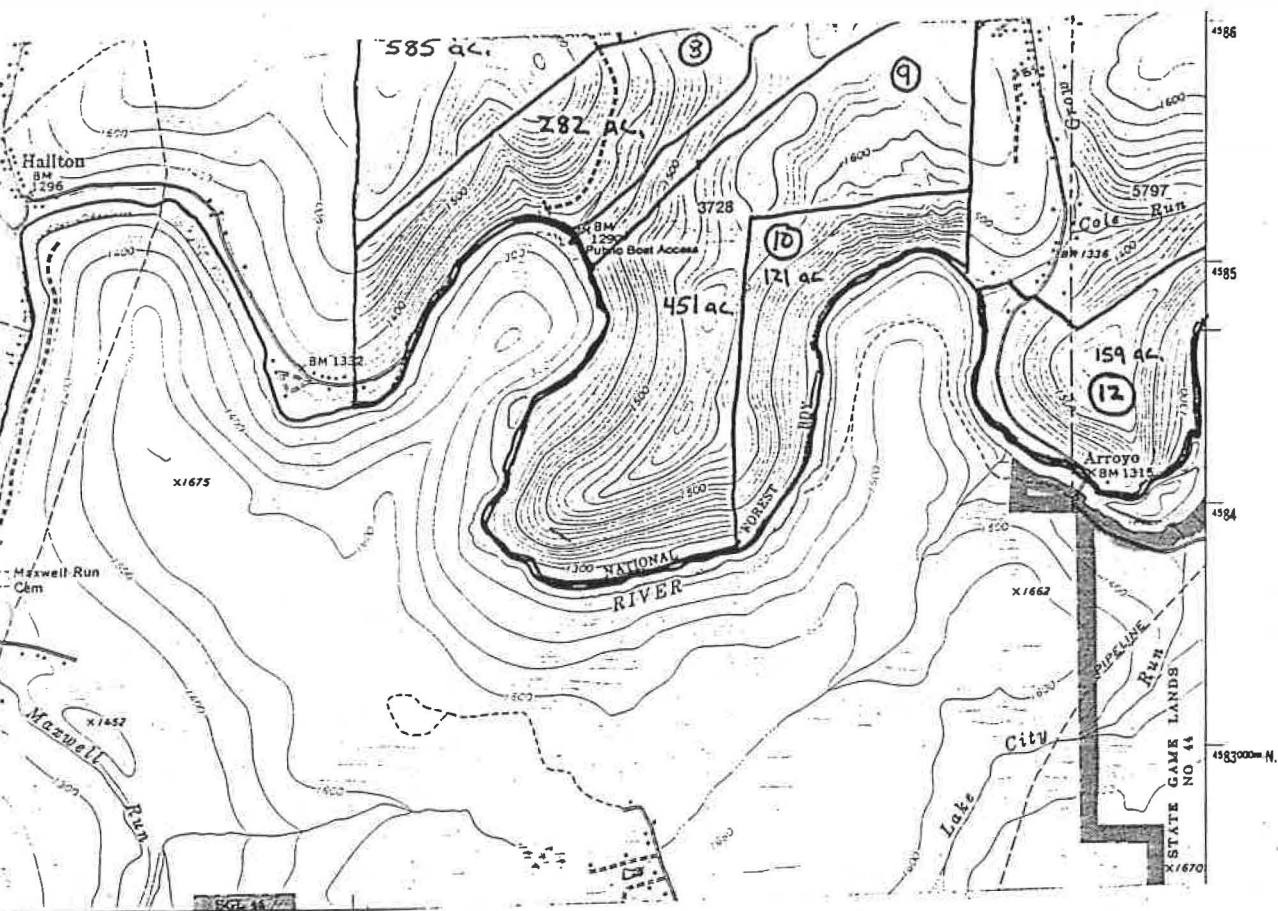
CORNPLANTER BRIDGE QUADRANGLE  
PENNSYLVANIA  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
SW/4 KINZUA 15' QUADRANGLE

MAP 15

Allegheny National Forest, 1989,  
Proposed Gypsy Moth Spray Blocks.  
Ridgway Ranger District



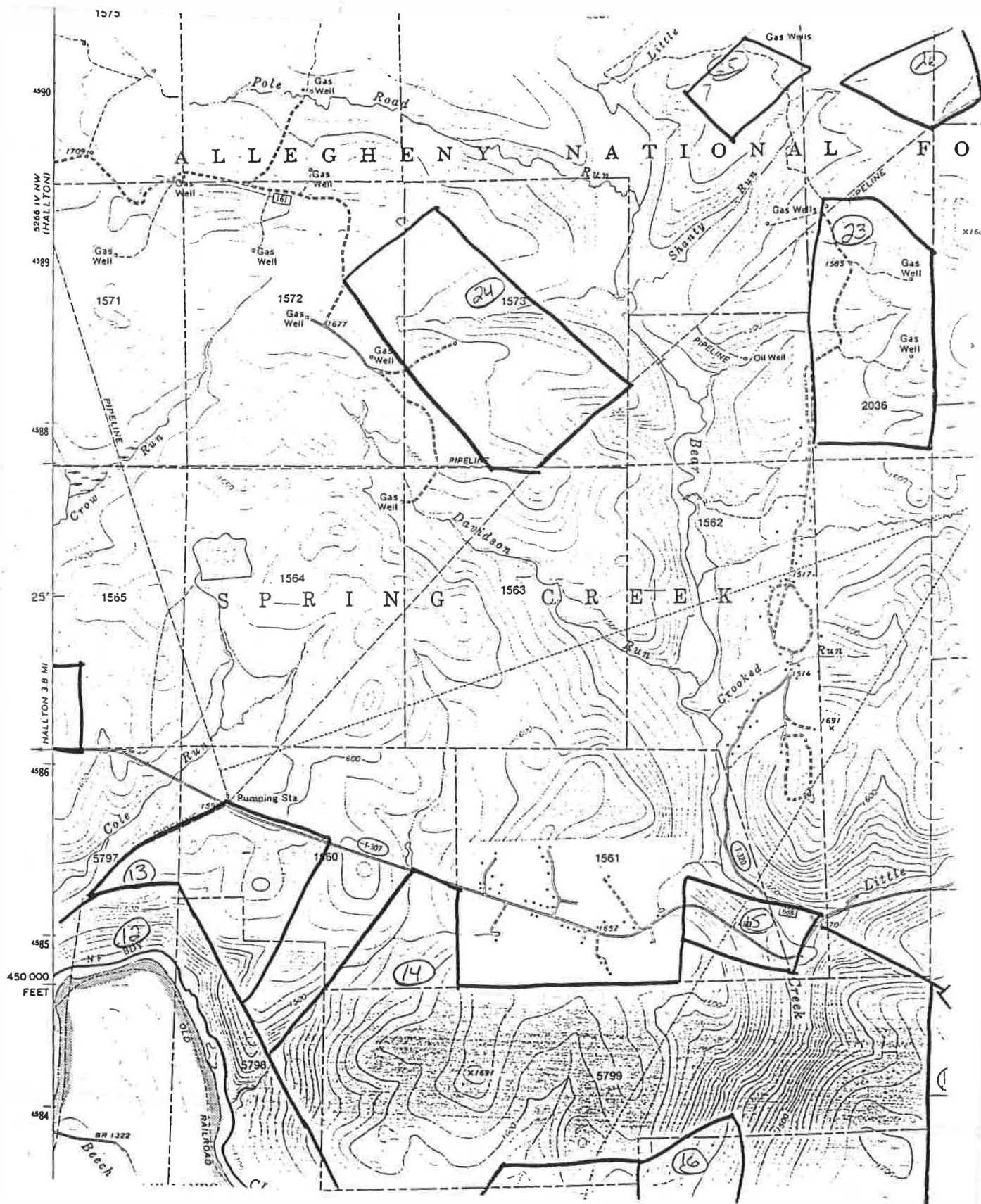
HALLTON QUADRANGLE  
PENNSYLVANIA  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NW 1/4 HALLTON 15' QUADRANGLE



MAP 16

Allegheny National Forest, 1989,  
Proposed Gypsy Moth Spray Blocks.  
Ridge and Valley Ranger District

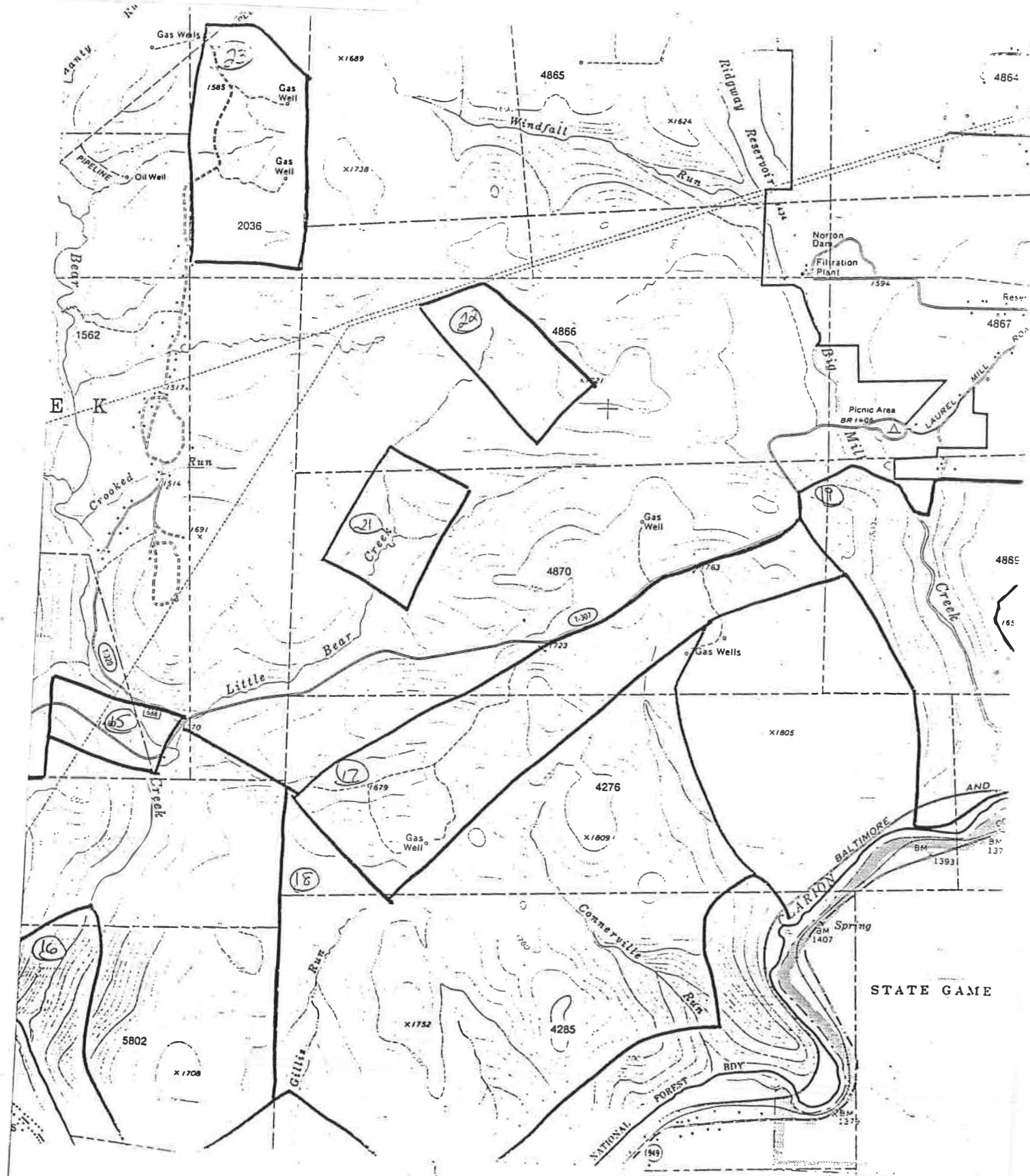
Allegheny National Forest, 1989,  
Proposed Gypsy Moth Spray Blocks.  
Ridgway Ranger District



PORTLAND MILLS QUADRANGLE  
PENNSYLVANIA-ELK CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NE 1/4 HALTON 15' QUADRANGLE

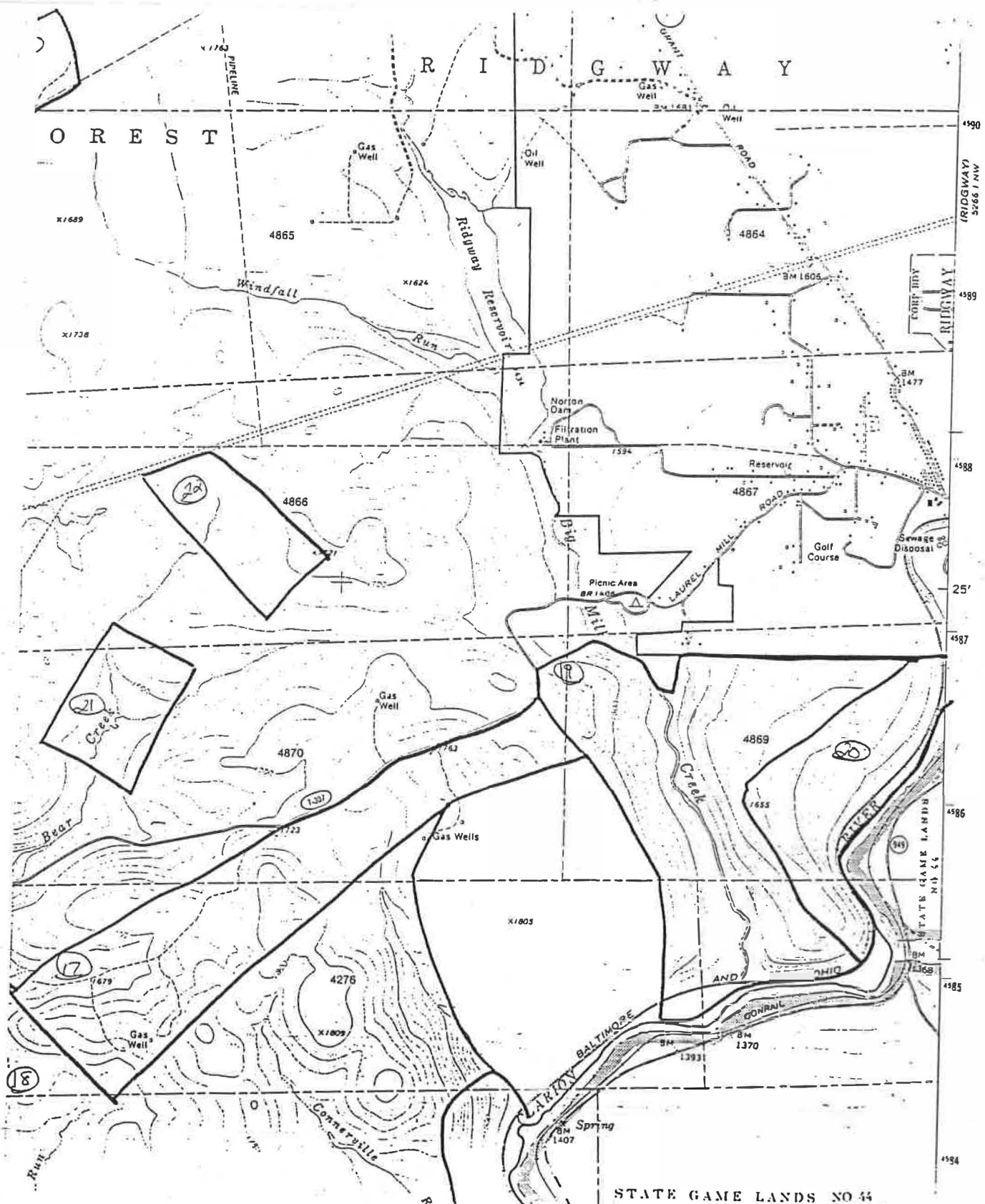


Allegheny National Forest, 1989,  
Proposed Gypsy Moth Spray Blocks.  
Ridgway Ranger District

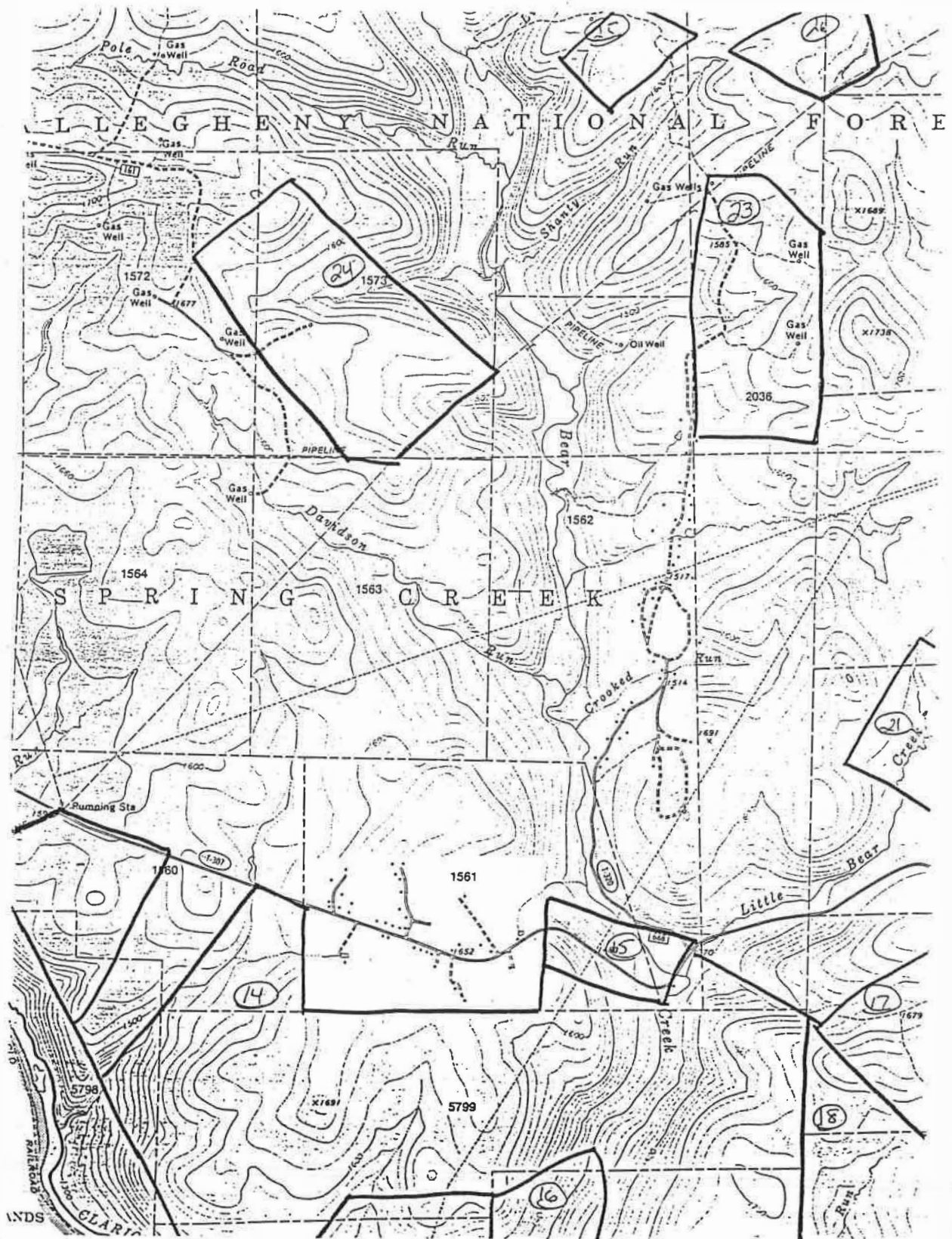


PORTLAND MILLS QUADRANGLE  
PENNSYLVANIA-ELK CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NE 1/4 HALLTON 15' QUADRANGLE

Allegheny National Forest, 1989,  
Proposed Gypsy Moth Spray Blocks.  
Ridgway Ranger District



PORTLAND MILLS QUADRANGLE  
PENNSYLVANIA-ELK CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NE 1/4 HALLTON 15' QUADRANGLE



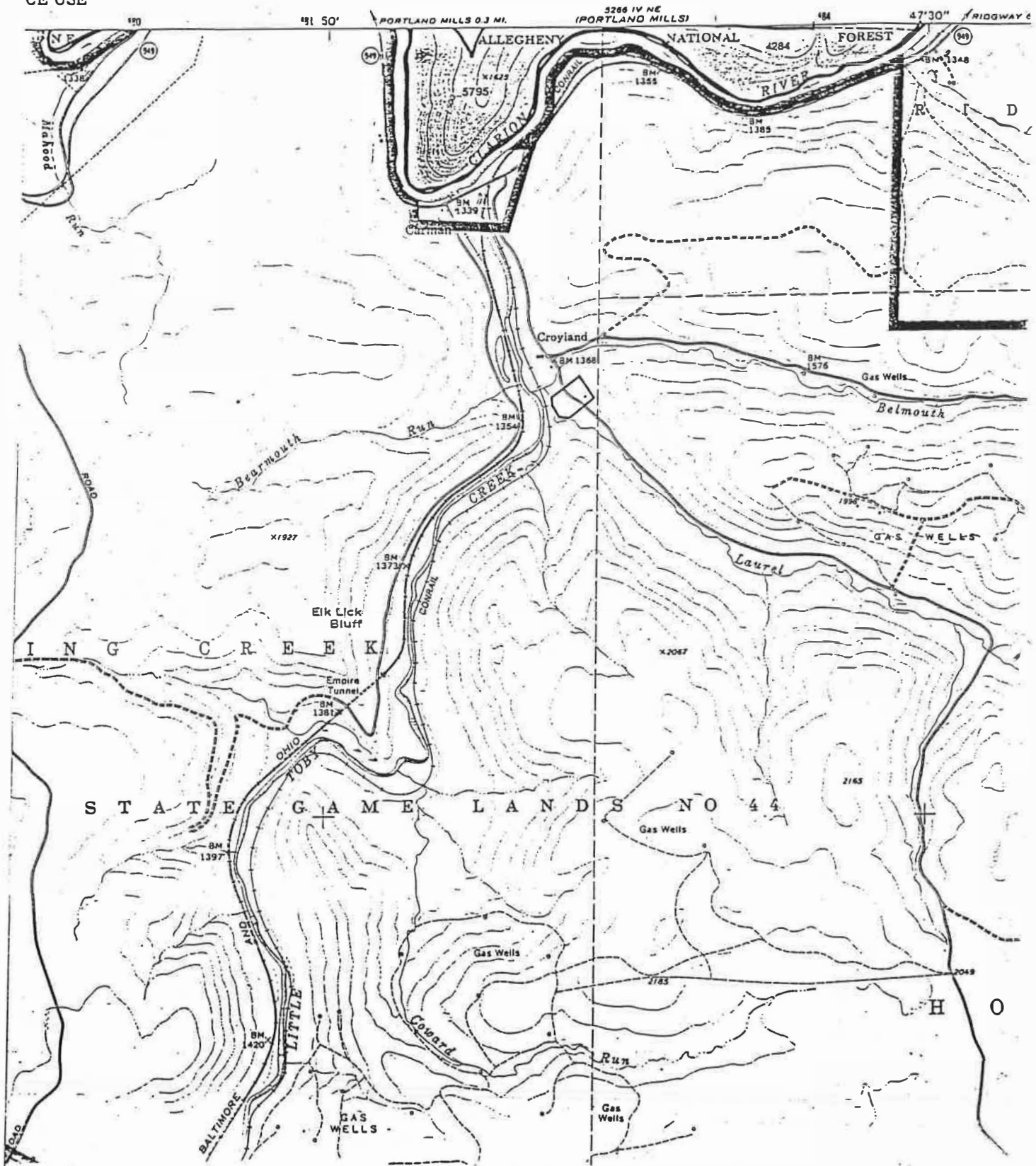
MAP 20

Allegheny National Forest, 1989,  
Proposed Gypsy Moth Spray Blocks.  
Ridgway Ranger District

PORTLAND MILLS QUADRANGLE  
PENNSYLVANIA-ELK CO.  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
NE 1/4 HALLTOM 15' QUADRANGLE

Allegheny National Forest, 1989,  
Proposed Gypsy Moth Spray Blocks.  
Ridgway Ranger District

CE USE



CARMAN QUADRANGLE  
PENNSYLVANIA  
7.5 MINUTE SERIES (TOPOGRAPHIC)  
SE/4 HALLTON 15' QUADRANGLE